



SOVE Newsletter

President's Message



Uli Bernier

Dear Colleagues,

I have just returned to the U.S. last night after having spent a week in travel to two scientific meetings. The Asian Society for Vector Ecology and Mosquito Control was a partial sponsor of the 6th International Forum for Surveillance and Control of Mosquitoes and Vector-borne Diseases, and the National Conference of Medical and Veterinary Entomology of the Entomological Society of China was held May 27-29, 2019 in Xiamen, China. This meeting was followed by a Vector Management Workshop, held May 31, 2019 in Taipei, Taiwan.

The meetings united colleagues from around the world and provided an excellent forum for discussion on the management of vectors and reduction of disease risk from pathogens that they transmit. Graham White provided the keynote address that opened the conference in Xiamen. His presentation provided a comprehensive overview of the life and accomplishments of Sir Patrick Manson, the physician who is credited as the founder of the field of tropical medicine. Should

you wish to attend the next meeting, the dates for the 9th IFSCMVD conference are set for May 23-28, 2021 in Dalian, Liaoning Province, China.

Major Dhillon and I will be attending the International Symposium on Phlebotomine Sandflies (ISOPPS) X meeting, July 15-19, 2019 at the Charles Darwin Research Station, Puerto Ayora, Ecuador. We hope to recruit additional SOVE members from this research community.

Our next SOVE meeting will be the 49th Annual SOVE conference, September 22-26, 2019, San Juan, Puerto Rico. Registration is open and reservations for lodging can be made at this time. I look forward to seeing you there. The Latin American SOVE will be held in November 2019. The tentative dates are currently the week before Thanksgiving. Additional information will be provided on the SOVE website when it becomes available.

Finally, you will be receiving ballots to select the 2020 Vice-President. Please watch your e-mail for the ballots and return with your vote.

Best,
Uli

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Regional Reports



Greetings!

Because this coincides with the 75th Anniversary of D-day I would like to relate a more personal story about Doug Johnson retired manager of Cascade County Mosquito and Weed Control District, Great Falls, Montana. I met Doug in the early 1980's while working for Zoecon (CLS). He was a customer of mine when I left Zoecon and started my own distribution company, Zanus. Here is the story!

Doug introduced me to his biological father, Don Hecox, who lives near my home in Montana. Don, who is in his 90's, was in the Army during WWII and participated in the North Africa campaign, the invasion of Sicily, Italy and the D-day invasion in Normandy, June 6, 1944.

Over the last fifteen years whenever Doug would visit his father he would make a point of bringing Don and spending an evening with me for dinner/drinks. One day he showed up in the afternoon with his dad at my office in Belgrade, MT, close to Bozeman. After a few minutes Don pointed out that he was born in the same home that became my office. Here are some other notable facts about Doug's family: Don is also a guitarist and plays at functions in the Gallatin Valley. Doug's grandad was an aviator in the early 19th century and built his own airplanes (some not too successful) but he lived to tell the tale.

I will send a few pictures I took while visiting Normandy about 10 years ago. Our trip to Paris was diverted to Frankfurt due to a large rainstorm over northern France. We were bused from Frankfurt to Paris where we rented a car and drove to the Normandy coast. Many of the fields we passed were saturated with water similar to the descriptions of the fields in 1944. It was a dreary, cold wet day and very sobering.

NORTHWEST REGION

David Sullivan
Regional Director

Breaking News!



Ashwani Kumar has been appointed to a prestigious position of Director, Vector Control Research Centre (VCRC), Pondicherry, India. The Centre accredited by WHO serves both as an institute for training in medical entomology affiliated with Central Pondicherry University, and a GLP facility for product testing under the new WHO pre-qualification initiative. Research activities at the Centre range from vector biology and control, epidemiology, disease modelling, GIS, molecular biology, genomics, to new vector control tool development and product evaluation under laboratory and field conditions. The Centre focuses on malaria, arboviral diseases (chikungunya, dengue, Japanese encephalitis), leishmaniasis, filariases (Bancroftian, Brugian), and others. Kumar will be overseeing a team of >200 scientific and technical staff assigned to the Centre at Pondicherry and its field stations in both eastern and southern India. Kumar feels confident about the bright future and capacity build-up of the Centre and its contributions to eliminating vector-borne diseases in India. We, at SOVE, are proud of Ashwani for his accomplishment to being selected as Director of CVCR. We wish him all the best!

And, Ashwani joins two other SOVE Board members, Lyle Petersen, Director, Vector-borne Diseases at the US CDC, and Paulo Pimenta, Director at the FIOCRUZ, Brazil, serving their own countries and beyond ("and me no Director n no direction but still on the Board!"). Kudos to our growing community of these brilliant directors!

Major S. Dhillon
Executive Director



Regional Reports



Effective May 30, 2019, India has appointed Dr. Harsh Vardhan as the a new Union Minister for Health and Science and Technology, Government of India.

India being a climatically diverse country, has been reeling under a spell of sweltering heat. The temperature in the Churu town in the north-western Rajasthan state of India has risen above 52°C in the last week which has thus become the hottest place on earth. At the same time, in the Himalayas, last week many roads have been opened to tourists by clearing 12 foot high snow. In the meantime, the southwestern monsoons have progressed and reached the beautiful southern state of Kerala on June 7, 2019. India will experience rains till the month of September. While the rains bring relief from the heat, they also provide ideal breeding conditions for mosquitoes; hence malaria peaks during this time of the year in many parts of India. The Aedes-borne illnesses especially dengue and chikungunya also show a rising trend during this period. Dengue has become a serious public health problem in India like many countries in Southeast Asia and the Pacific. India is also endemic to lymphatic filariasis, visceral and cutaneous leishmaniasis and Japanese encephalitis. Yellow Fever does not occur in India.

India is targeting elimination of leishmaniasis, lymphatic filariasis and malaria by the year 2030. On May 15, 2019, the Indian Council of Medical

Indian Region SOVE

Ashwani Kumar
Regional Director

Research (ICMR) launched a consortium called ‘Malaria Elimination Research Alliance’ (MERA India). The ICMR has provided a start-up grant of \$ 2.2 million for funding research projects in support of malaria elimination in India. I was invited to contribute during the day-long scientific deliberations held at the ICMR, New Delhi. A special issue of the *Journal of Vector Borne Diseases* (vol. 58, no.1) on Malaria Elimination was released on the occasion by Mrs. Preeti Sudan, Secretary Health, Ministry of Health and Family Welfare, Govt. of India and Dr. Balram Bhargav, Director General, ICMR and Secretary, Department of Health Research, Govt. of India. The function was attended by other dignitaries including those from WHO (SEARO) and National Vector Borne Diseases Control Programme of India. In this special issue, several interesting articles on malaria elimination can be viewed by visiting www.jvbd.org or www.nimr.org.in/jvbd.html. An article titled, “Some considerable issues concerning malaria elimination in India,” was contributed by me. Aside from this, three interesting articles on DaMAN project, Comprehensive Case Management Project (CCMP) in the highly endemic Odisha state and Malaria Elimination Demonstration Project (MEDP) in Mandla, Madhya Pradesh state in PPP mode (Govt. of India and SUN Pharma, USA collaboration) are worth a read.

.....*I-SOVE region report cont'd on p.5.*

Asian Society for Vector Ecology and Mosquito Control (ASVEMC)

Reporting for ASVEMC: **Rui-De Xue**

ASVEMC Board Meeting—Minutes Highlights

The ASVEMC Board meeting was held at Xianglu Grand Hotel, Xiamen, China, on May 26, 2019 at 5:00 pm. The items discussed were as follows:



Rui-De Xue

Award presentations: The Board discussed and scheduled award presentations at the 4th Member Meeting before the 6th International Forum for Surveillance and Control of Mosquitoes and Vector-borne Diseases (IFSCMVD), on May 27. The ASVEMC awards will be presented by ASVEMC President Gunter Muller and the SOVE 50 Years special member awards by the SOVE President Uli Bernier.

Election of ASVEMC officers: All regional directors agreed to continue serving on the Board for the next two years. The new ASVEMC President will install new regional directors.

The Board voted to accept Ming-Hao Zhao's resignation and voted to present him the Outstanding Service Award at the 4th ASVEMC Member Meeting. The Board voted to appoint Abu Hassan Ahmad as the new President of the ASVEMC for the next two years. President-Elect Chu n-Xiao Li plans to attend the SOVE annual meeting to be held in September this year in Puerto Rico.

SOVE President Bernier will install the new Executive Board (President, President-Elect, Vice President, Immediate Past-President, and Executive Director).

The next Board meeting will be held in Suzhou before the 8th IFSMDV in late October. The meeting was adjourned at 5:30pm.

Member Meeting Minutes Highlights

The 4th ASVEMC meeting was held at Xianglu Grand Hotel, Xiamen, China on May 27. The ASVEMC Executive Director Tong-Yan Zhao moderated the meeting and President Gunter Muller presented the following awards: Distinguished Achievement Award to H. Kawada and T. Charconvirayaphap; Distinguished Service Awards to: Qi-Yong Liu and Brian Liang; Outstanding Service Award to Ming-Hao Zhou. The SOVE President Uli Bernier presented the SOVE 50 Years recognized member award to Gunter Muller and Qi-Yong Liu.

SOVE President Bernier installed the ASVEMC new officers: Abu Hassan Ahmad as President, Chun-Xiao Li as President-Elect, Feng-Xia Meng (voted in Ningbo, October 2018) as Vice President, Gunter Muller as Immediate Past-President. The ASVEMC new President announced that all regional directors remain unchanged.

Both Muller and Zhao announced the next meeting (5th) to be held in Dalian before the 7th IFSCMVD in May, 2021. SOVE President Bernier announced the SOVE annual meeting to be held in Puerto Rico in late September, 2019 and the 8th International SOVE Congress in Charleston, SC, USA, in September 2021. The meeting was adjourned at 8:40am.

Delegates at



The 6th International Forum for Surveillance and Control of Mosquito and Vector-borne Diseases

..... **I-SOVE report** cont'd from p.3.

The SOVE (Indian Region) is now raising its membership which has gone up from 48 to 60 in the last 2 months. Our target is to raise it to 100 soon and all out efforts are being made in that direction. Two major activities are planned for this year: a round table discussion on entomological capacity building and strengthening in Sept. 2019 and a workshop for the training of entomologists of state and municipal bodies in Nov. 2019. The Indian SOVE has also provided partial travel support to two Indian PhD scholars (\$450.00 app. each) for attending the conference on Global Vector Control Response held in Wageningen, the Netherlands from 11-13 June, 2019. Ashwani Kumar, Director and Ajeet Kumar Mohanty, Secretary (Indian SOVE) are investigators in a US NIH funded International Center of Excellence for Malaria Research (ICEMR) in India. They are invited to present a progress report of the project in the Annual Workshop of the 11 global ICEMRs being held in Nairobi, Kenya from July 24-26, 2019.

Recently, the *Indian Journal of Medical Research* has published a special issue ‘Gandhi and Health @ 150’ to commemorate the 150th birth anniversary of the father of Nation of India, Mohandas Karamchand Gandhi. Several interesting articles written by scholars on different aspects of health and hygiene with reference to Mahatma Gandhi can be found by visiting www.icmr.nic.in/publications/ijmr.html.

Ashwani Kumar

Students' Page

Bethany McGregor Student Representative

Greetings from the students of SOVE!

We've made it to another summer season, which means many of our student members are hard at work in the field collecting data! As I've been working to set the lineup for the student symposium at this year's SOVE meeting, I've been met with an incredible diversity of research topics and hard-working students who are so often the "boots on the ground" for new and impactful vector ecology research. As we all move through our summers, let's remember to thank our students and young professionals for the enthusiasm and diligence with which they often perform their pivotal research.

Last year, the students attending the annual conference in Yosemite had their first student meeting to discuss the future of the SOVE student group. At this meeting, one highly supported change was to introduce abstract submissions for participation in the student symposium. This would introduce additional transparency in the symposium selection process and provide increased opportunity to all SOVE students. This year, an email was sent out to the students on our SOVE student listserv welcoming students to submit an abstract for consideration in the student symposium. I believe this is an excellent first step towards achieving the goals the students laid out in our inaugural meeting! Furthermore, this selection process has resulted in a broad diversity of research topics and has set the stage for another



incredible student symposium in Puerto Rico!

In the last newsletter, I included a call for all interested SOVE students to send me their contact information to be added to the listserv. If you did not receive the emails about the abstract submission call, I do not currently have you on the SOVE student listserv. If you'd like to be added, please contact me at bmcgreg1@gmail.com with your name, email, university affiliation, degree you are seeking, and whether you are an active SOVE member (there's no time like the present to join!) to be included in future correspondence.

Finally, I would like to end by saying that more changes will be on the horizon for the student group. I have been very honored to act as the student representative for this inaugural year, but I'm very interested in passing on this position to a formally elected student representative. At this year's SOVE meeting in Puerto Rico, the board will be finalizing the outline for the student group so that we can move forward with elections. We will also be having another formal student meeting to again discuss the future of the student group and take ideas towards developing a stronger student community. Change takes time, but I believe we are well on our way to establishing a strong student-led community within SOVE.



Flea-borne Typhus: Emerging and Expanding!



Angela Caranci, Ph.D.
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As with other vector-borne diseases endemic in the US, flea-borne typhus, or murine typhus, has displayed both acute and gradual epidemiological shifts in the past five years. Flea-borne typhus, a disease associated with infection by the bacterium, *Rickettsia typhi*, occurs infrequently in the US, and is not on the list of CDC reportable diseases. However, with 300 human cases annually, murine typhus is considered endemic to areas of California, Hawaii, and Texas. Transmitted to humans by infected rat fleas and cat fleas, flea-borne typhus can manifest initially as a mild, nonspecific illness, yet without prompt diagnosis and treatment patients may progress to a more severe disease.

In California specifically, an outbreak of flea-borne typhus was declared in Los Angeles County in the fall of 2018. Both Los Angeles County and Orange County in southern California are areas with annual human cases of flea-borne typhus. Beginning in 2012-2013, the number of human cases of flea-borne typhus increased from the previous 10-year average of 24 cases per year to averaging greater than 100 human cases per year across the last 7 years (CDPH 2019). While this shift may be partially attributed to changes in diagnostic procedures and an increase in clinical consideration of the presenting symptoms, it is difficult to ignore correlations to climate change and socioeconomic instability. California media outlets have reported extensively on the housing and homelessness crises in southern California, and the downstream increase in refuse and rat populations that can attribute to increases in flea-borne diseases.

A recent study aimed to assess transmission dynamics in bordering Riverside County, to investigate differences in urban and suburban disease cycles. Evidence of *Rickettsia felis* circulating in cats and cat fleas supports a possible secondary transmission cycle which may account for a proportion of the endemic cases in the region (Mullins et al. 2018). This adds complexity to an already difficult transmission cycle to interrupt, as most successful means of control rely on shift in human behavior and large personnel investments by public health and vector control agencies.

Texas has historically reported the highest numbers of annual human cases throughout the US, averaging over 275 human cases per year over the last 10 years, peaking at 519 human cases in 2018 alone. In recent years, it appears that the number of human cases has been on the rise, and the areas of the state endemic to flea-borne typhus are expanding. In the past, the southern most counties of Texas were areas considered hotspots for human disease, yet in the last five years, human cases have drastically increased in Dallas County, Harris County, and the Ft. Worth area (Shuford et al. 2018).

In recent years, the number of human cases of flea-borne typhus have increased, in some locations to outbreak levels. Local agencies can provide guidance for homeowners regarding preventive techniques to avoid contact with infected fleas particularly in areas associated with the suburban transmission cycle. In some scenarios, citywide planning may be essential, and vector-borne disease professionals should continue to prioritize surveillance and control efforts that target rodent reservoirs and associated flea vectors in order to provide baseline information for policy and program development.

References Cited:

CDPH, vector-Borne disease Section (2019). Human Flea-borne Typhus Cases in California.
<https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Typhus.aspx>

Mullins, K.E., Maina, A.N., Kruger, L., Jiang, J., Cummings, R., Drusys, A., Williams, G., Dhillon, M. & Richards, A.L. (2018). Rickettsial Infections among Cats and Cat Fleas in Riverside County, California. *Am J Trop Med Hyg* 99:2 291-296.

Shuford, J., Hunt, P., Mayes, B. (2018). Changing Epidemiology of Murine Typhus in Texas. *Open Forum Infect Dis* 5 (Suppl 1): S242.

For Your Calendar

The 85th Annual Meeting of the American Mosquito Control Association will be held February 26—March 2, 2019 in Portland, Oregon.

The 10th International Symposium of Phlebotomine Sand Flies.

The San Francisco de Quito University (USFQ) in cooperation with the USFQ's Galapagos Academic Institute for the Arts and the Sciences (GAIAS) is organizing the 10th International Symposium of Phlebotomine Sand flies. The symposium will be held from July 15-19 at San Cristobal, Galapagos Islands. For more information about the conference, please visit the website: <http://www.usfq.edu.ec/eventos/isops/Paginas/default.aspx> (reporting Alex Chaskopoulou).

Latin American SOVE meeting will be held November 24-27, 2019 in Manaus, Brazil. For more info contact Major Dhillon at mdhillon@northwestmved.org.

Member News

see Breaking News p.2

Resources

I wanted to share with SOVE membership the following:

Funding opportunity: Targeted Prevention for Tick-borne Diseases (R01 Clinical Trial Not Allowed)(link is external)- RFA-AI-19-037 Deadline: August 7, 2019 Contact person: Maliha Ilias (maliha.ilias@nih.gov)

Emerging Infectious Diseases Research Centers (U01 Clinical Trial Not Allowed)(link is external)- RFA-AI-19-028 Deadline: June 29, 2019 Contact person: Jean Patterson (jean.patterson@nih.gov)

Immune Response to Arthropod Blood Feeding

(R21 Clinical Trial not allowed) (link is external)- PAR-18-860 Deadlines: June 14, 2019, February 14, 2020, October 15, 2020 Contact person: Kentner Singleton (kentner.singleton@nih.gov)

Resources for investigators:

Vector Resources:

<https://www.beiresources.org/Catalog/VectorResources.aspx>

Repository Resources:

<https://www.beiresources.org/Home.aspx>

Resources for Researchers:

<https://www.niaid.nih.gov/research/resources>

Vector Population Biology database:

<https://www.vectorbase.org/popbio>

Vector Bioinformatics database:

<https://www.vectorbase.org/>

Thanks!

Adriana Costero, PhD

Email: acostero@niaid.nih.gov





Society for Vector Ecology

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We are on the Web!
www.sove.org

About SOVE

The Society for Vector Ecology is a professional organization formed in 1968 by a group of individuals involved in vector biology and control programs in California. The membership has since grown to represent an amalgamation of diverse research and operational and extension personnel from all over the world. The Society is committed to solving many complex problems encountered in the field of vector biology and control. Among these are the suppression of nuisance organisms and disease vectors through integration of control elements, such as environmental management, biological control, public education, and appropriate chemical control technology.

The Society publishes the biannual Journal of Vector Ecology that contains research and operational papers covering many phases of vector biology, ecology, and control. The Society also distributes a periodic newsletter and holds an annual conference in the months of September/October.

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